



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D119-796-251
Job Sheet 176940



Part No: D119-796-251

Job Qty: 1 ea

Part Name: Aft Crosstube Installation With Step (No Hardware)



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 5/3/18

Job Tracking No:

Due Date: 5/31/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG D119-796-251 REV E, IIN-D119-796 REV F IPP REV:A 14.09.09 NEW ISSUE DD VERF:JLM IPP
REV:B 14.10.15 AS PER REV.A DD VERF:JLM IPP REV:C 14.11.19 AS PER REV.C DD VERF:JLM IPP
REV:D 14.12.09 AS PER REV.PC6 DD VERF:JLM IPP REV:E 15.02.11 AS PER REV D JLM VERF:DD IPP
REV:F 17.12.11 REMOVE PACK KIT DD VERF:DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	5/31/18	5/31/18	0.00	0.00	Start Up Crosstubes-1		AS AUG 30 2018
130	Crosstubes	1 pcs	5/31/18	5/31/18	0.00	0.51	Crosstubes-1		AS AUG 30 2018
140	QC	1 pcs	5/31/18	5/31/18	0.00	0.00	QC5		38
145	DC	1 pcs	5/31/18	5/31/18	0.00	0.00	DC		9-80 W/R
150	Packaging	1 pcs	5/31/18	5/31/18	0.00	0.00	Packaging3-1	L6050	AS AUG 30 2018
160	QC21-FG	1 Ea	5/31/18	5/31/18	0.00	0.00	QC21		21 AUG 30 2018

Part Op 130 - 1- Install step and clamp with the proper position per dwg D119-796-251 ***Torque all clamps to 50 IN-LBS max.***
Descriptions: 140 - ***RE-CHECK TORCQUE ON CLAMP AS PER DWG.***
145 - Photocopy bluefile and create labels as per PPP D119-796-251 chg 004
150 - Identify and pack for shipping as per PPP D119-796-251

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D119-796-241	Aft Crosstube Installation Without Step (No Hardware)	1 Ea (1 ea)	90-Start up Operation	
D5123-3	Clamp Cushion	4 Ea (4 ea)	90-Start up Operation	
D5149-043	Aft Step Base Assembly	2 Ea (2 ea)	90-Start up Operation	
MS21920-25	Clamp	4 Ea (4 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D119-796-241 507535	①	7	0
	D5123-3 F160679	④	294	0
	D5149-043 3092695	②	5	0
	MS21920-25 5071411	④	97	0



Container No: S106777



Part: D119-796-251

Job No: 176940

Serial No/Batch: S106777

Revision: E/F

Inspector:

Exp Date:

Instructions: TC STC SH14-45- Issue 1, FAA STC SR03504NY 15/01/28, EASA

1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

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found.

Plex 5/3/18 10:13 AM Dart.lajeunesse.marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

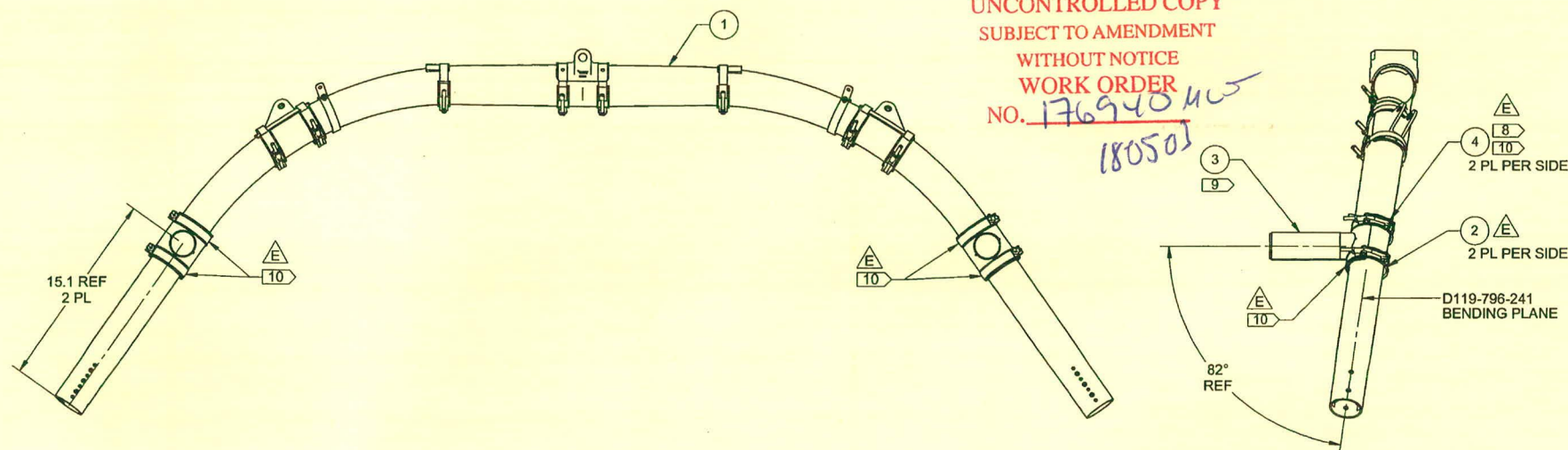
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

ITEM	QTY	P/N	DESCRIPTION
	X	D119-796-251	XTUBE ASSY (AW119 MKII AFT)
1	1	D119-796-241	XTUBE ASSY (AW119 MKII AFT)
2	4	D5123-3	CUSHION
3	2	D5149-043	AFT STEP ASSY
4	4	MS21920-25	CLAMP

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 176940 180501



D119-796-251 XTUBE ASSY (AW119 MKII AFT)

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 METHOD 6.5
- 7) WEIGHT: 29.9 lbs
- 8) TORQUE MS21920-25 CLAMPS TO 50 IN-LBS MAX
- 9) LOCATE STEP USING POST FITTING ON CROSSTUBE
- 10) POSITION MS21920 CLAMPS SECURING THE STEPS AS SHOWN. THE THREADED PORTION OF THE CLAMP MUST FACE THE SAME DIRECTION AS THE STEP

E	MODIFY CLAMP ORIENTATION, ADD NOTE 10, REMOVED SECTION A-A (PAR16-527)	ML	17.02.10
D	D5123-3 WAS D5123-9, MS21920-25 WAS -26, ADDED SECTION A-A	AP	15.01.19
C	RE-DESIGN STEP INSTALLATION	DB	14.11.24
B	D2274 RADIUS BLOCK WAS D5153-1, AN4C12A WAS AN4C10A	AP	14.10.04
A	NEW ISSUE	AP	14.09.03
REV.	DESCRIPTION	BY	DATE
DESIGN	AP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	ML		
CHECKED	NO	DRAWING NO.	REV. E
MFG. APPR.	DD	D119-796-251	SHEET 1 OF 1
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	XTUBE ASSY (AW119 MKII AFT)	NTS
DATE	17.02.10	COPYRIGHT © 2014 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
2017-05-04
ECN17-538

APPROVED

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
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Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								